

Q-4 report
for the reporting interval ending
December 10, 2012 – {Q4}
(including prior periods of 2012)
to the
Indiana 9-1-1 Board
from
***IN**digital telecom*

Executive Summary

This report is for the year to date third quarter of 2012 for the status of the IN911 network.

Project overview, items 1 through 4:

- Work continues to sunset the Crossroads (G-1) network.
The FDC (functional direct connect) connection arrangement project continues, with many counties now online Updated status and network maps are included.

IN911 network status, items 6 through 13:

- New FDC trunk groups are installed within the G-11 network.
- INdigital participated in an industry standards event, and the SIP:ME routing platform continues to grow.
- updated call activity charts are included.

Industry stakeholders, items 14 through 19:

- There are no wireless carrier issues to report.
- Work with Century Link and Frontier continue to expand inter-agency connectivity in adjacent states.
- All Indiana State Police posts are now online, and inter-agency transfers continue to increase in number. Some counties have not yet programmed their CPE to assure and improve public safety.

- INdigital continues to refine the reporting and data management platform called the Network PSAP Tool Kit (NPTK). This now includes a statewide view.

Network quality, items 20 through 24:

- There are no significant operating issues to report.
- The IN911 network had some events that impaired its operation, and action has (and will continue) to be taken to make network improvements.
- Trouble ticket levels remain very low as an index to calls processed.

Progress payments and

New service development, items 25 through 27:

- There is no retainage release request in this report.
- texTTY, the non-voice service platform - is being rolled out throughout the state. The platform is emerging as an example of industry standard work being developed within ATIS and NENA.
- INdigital is adding revenue assurance modules to the NPTK to provide a means to enforce compliance with the new legislative acts.
- INdigital has received an industry letter regarding a patent issue related to a NENA developed industry standard.

section A – project overview

- 1). Our work to sunset the (G-1) Crossroads network continues. Work to migrate all PSAPs and originating service providers to the G-11 SIP:ME (SIP message engine) platform continues.
- 2). The IN911 status map is shown at right. All Indiana State Police dispatch centers are online. Work continues to activate the capability of full inter-agency transfers for the light green counties.
- 3). The creation of inter-company PSAP trunking from the G-11SIP:ME platform has been successful. There are 53 counties connected to this platform.
- 4). There are 57 PSAPs that still receive active service from the Crossroads network. These counties are represented by the light green shading in this map.
- 5). Our next initiative is the migration of the remaining wireless carrier connections from the Crossroads network to the Cronus series II platform. This project will begin in 2013, after the holiday 'quiet period'.

Statewide IN911 Status Update

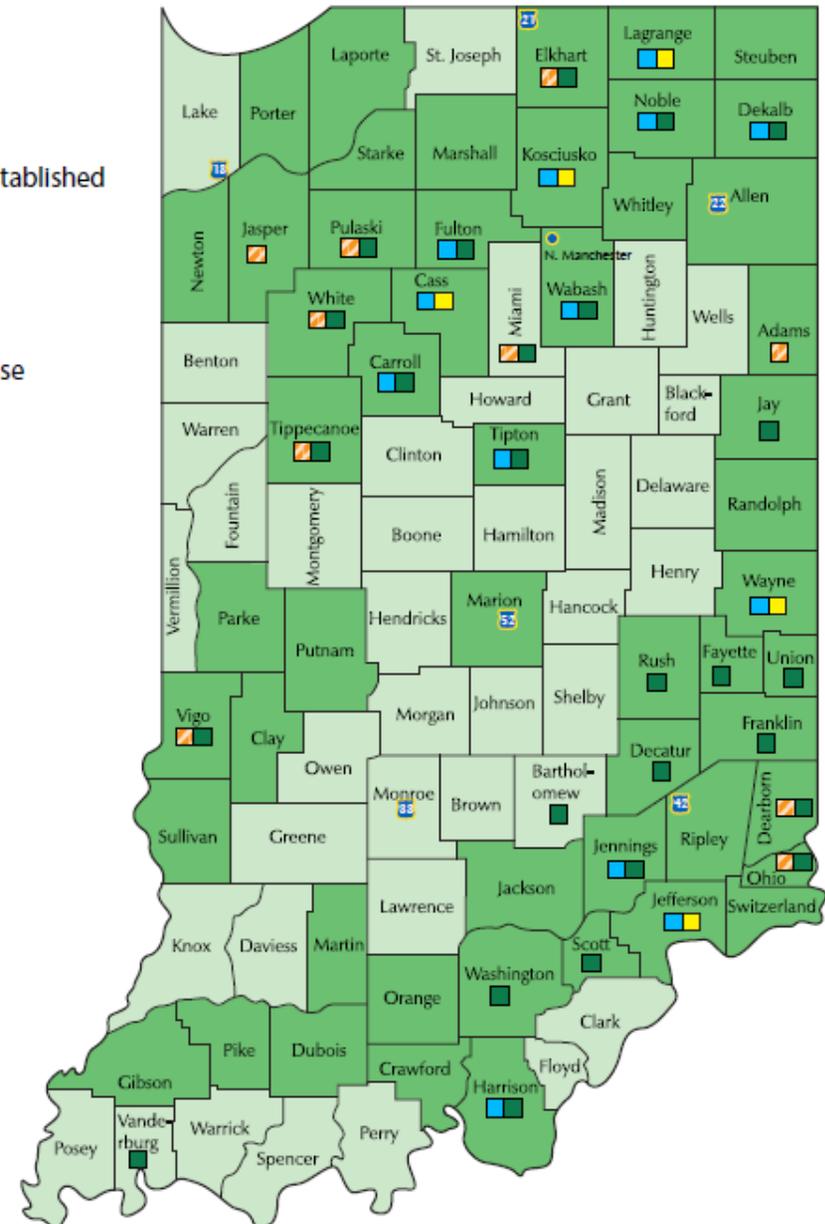
IN911 Network

- FDC in use
- FDC connection Established

MEVO/ texTTY

- MEVO in use
- MEVO pending
- ISP Post MEVO in use
- texTTY in use
- texTTY pending

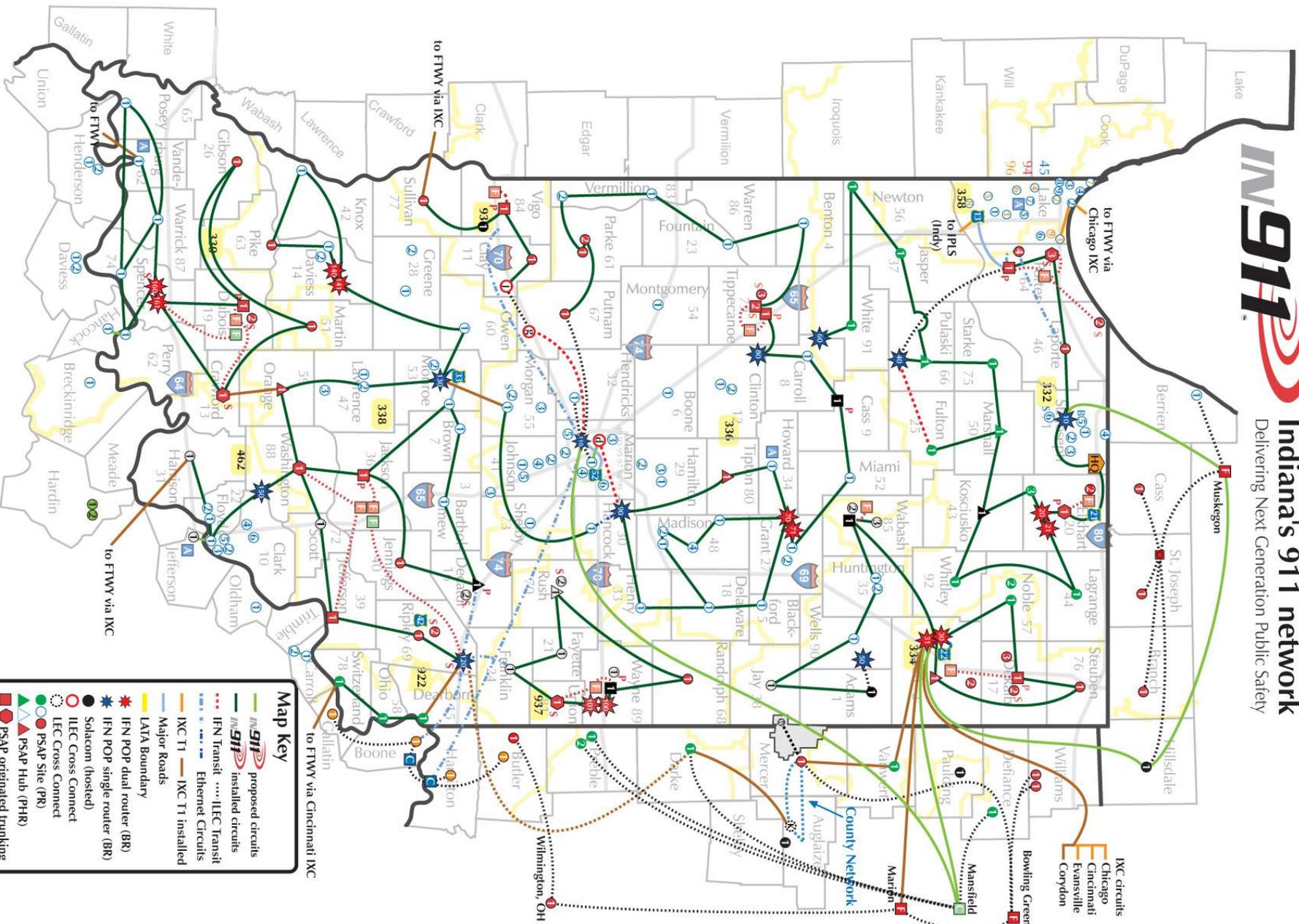
12-318 version 1.3





Indiana's 911 network

Delivering Next Generation Public Safety



Map Key

- installed circuits
- proposed circuits
- ILEC Transit
- Ethernet Circuits
- IXC T1
- IXC T1 installed
- Major Roads
- LATA Boundary
- IFN POP dual router (BR)
- IFN POP single router (BR)
- Socalcom (hosted)
- ILEC Cross Connect
- ILEC Cross Connect
- PSAP Site (PR)
- PSAP Site (PR)
- PSAP Hub (PHR)
- PSAP Hub (PHR)
- PSAP originated trunking
- PSAP originated trunking
- Toll Road Admin Building
- Toll Road Admin Building
- Indigital Crown Node 37
- Indigital Crown Node 37
- Frontier 5ESS SR
- Frontier 5ESS SR
- AT 5ESS SR
- AT 5ESS SR
- CBT 5ESS SR
- CBT 5ESS SR
- CenturyLink DMS
- CenturyLink DMS

section B - network status

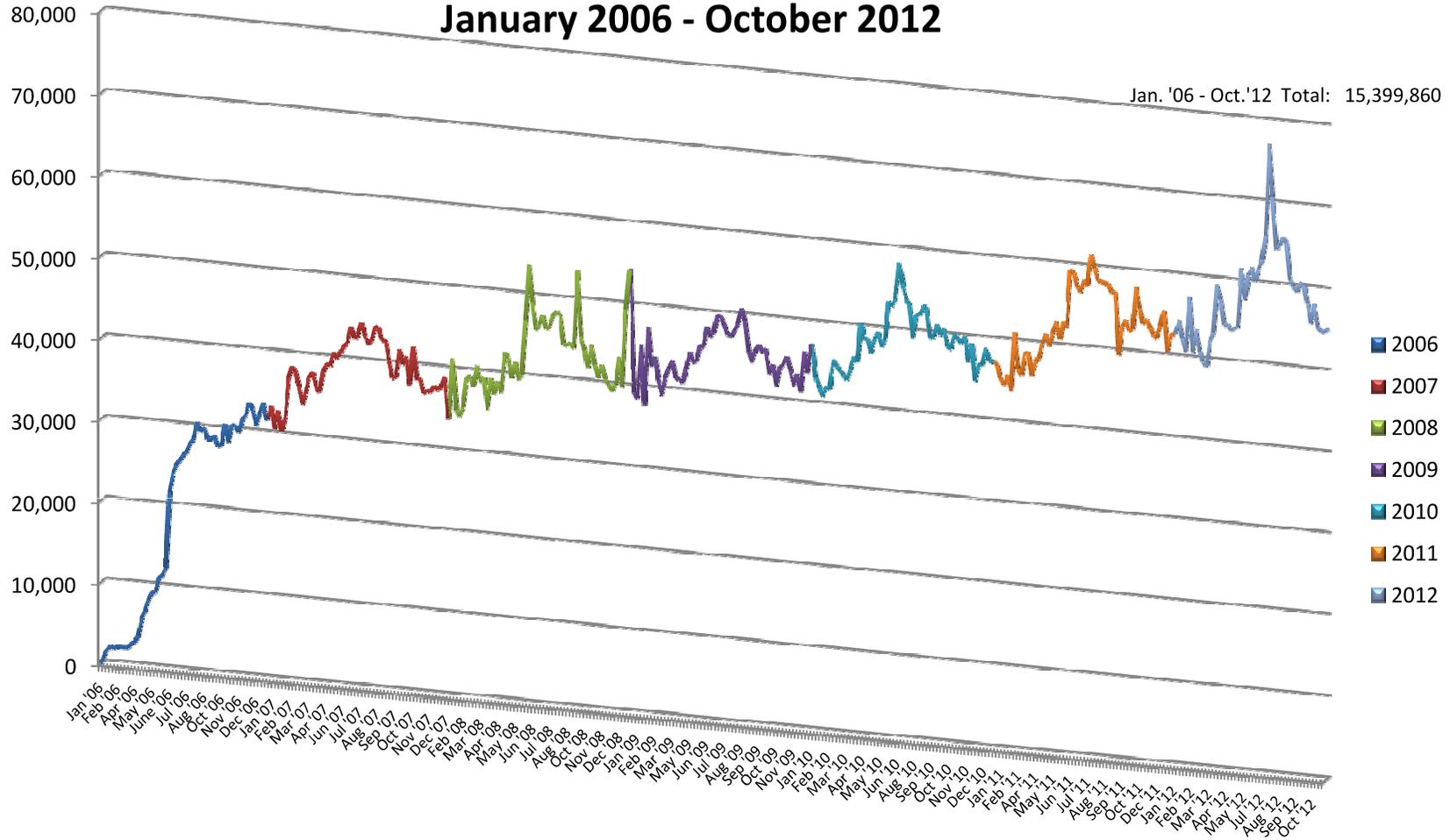
- 6). **IN911 network modernization** – INdigital is working with AT&T to complete the network updates associated with the functional direct connect (FDC) project. Floyd and Clark counties now receive their wireless calls using the FDC trunks.
- 7). **Network service enhancements** – As the IN911 network continues to evolve, we have upgraded certain legacy connections to full i3 compliant Ethernet connectivity.

Ethernet active	Ethernet pending
Dekalb	Decatur
Franklin	Elkhart
Fulton	Jennings
Jefferson	Lagrange
Kendallville PD	Porter
Kosciusko	Washington
LaPorte	Vigo
Noble	
Tippecanoe	
Wabash (N. Manchester)	

- 8). **SLA assurance** – INdigital continues to refine a real time SLA compliance tracking module that will be integrated into the network monitoring engine (IN-ME) in 2013.
- 9). **NENA i3 compliance** – INdigital participated in the NENA ICE -5 (industry collaboration event) at IIT, in Chicago, IL.
Participation in these events ensure that INdigital is standards complaint - and fully interoperable with – i3 systems from other industry vendors.
- 10). **Call routing modernization** –The SIP:ME (SIP message engine) now serves **34** counties directly, an increase of 13 counties since our last report. SIP:ME will provide primary service for counties using the FDC connection arrangement when it is deployed.
- 11). **MEVO phone installation.** There are currently 18 counties with MEVO phone installations. (see the accompanying map on page 3)
- 12). **Call volumes** – Graphs for 2012 year to date call volumes are on the following page of this report. Call volumes continue to increase year by year.

IN911 Network Weekly Call Totals January 2006 - October 2012

Jan. '06 - Oct. '12 Total: 15,399,860

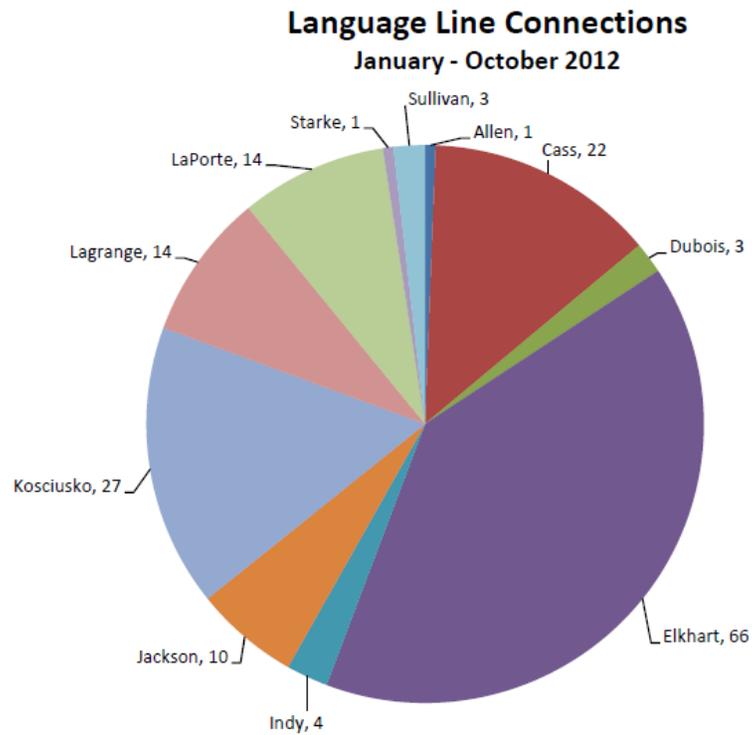


13). **IN911 Embedded features** – The following chart shows usage statistics reports for Language Line and Joined path conference service.

Language line provides real time language translation service for all agencies.

Joined path conference service allows full inter-agency call transfer with location information.

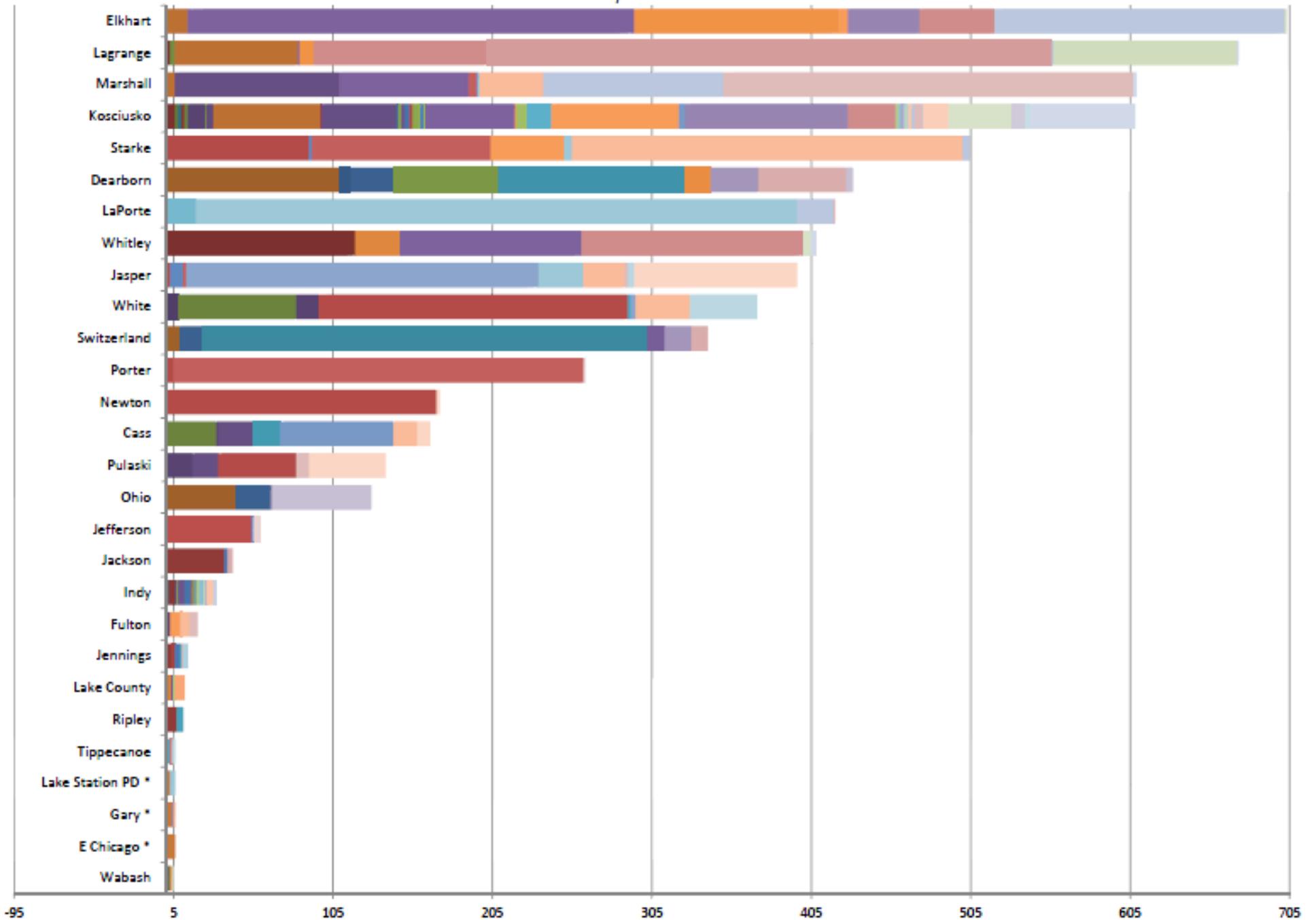
The chart on the next page shows the overall joined path service for the network.



the rest of this page is intentionally blank

Joined Path Conference Bridge Totals

January - October 2012



NOTE: Data for inbound transfers to ISP posts and Language Line transfers are not included.
 *Lake County PSAPs

section C - industry stakeholders

14). **Wireless carrier status** - There are no originating service provider issues to report. All wireless carrier connections to the IN911 network will transition from the Crossroads network to the G-11 network in the next 12 months.

15). **Adjacent state connectivity** – INdigital has completed connectivity with the Michigan border counties and is working with Frontier to finalize equipment programming.

In Ohio, connectivity with CenturyLink border counties is also complete.

For Ohio border counties served by Frontier, we have trunks on order and expect them to be completed before the LEC network blackout in December.

We will do the final testing and turn up in these markets early in the first quarter of 2013.

16). **Regulatory matters** – INdigital filed to become a 911 service provider in Illinois. This will allow us to work on the inter-state transfers with Illinois.

17). **Inter-agency cooperation** – All Indiana State Police posts are active on the Message EVolution (MEVO) platform, providing call

transfer with ALI data sharing with county 911 authorities.

INdigital continues to work with AT&T so that agencies they serve can have the customer equipment programmed to transfer calls using the FDC network.

The chart below shows the transfers from the various active county PSAPs to the Indiana State Police districts.

D 52 = Indianapolis

D 13 = Lowell

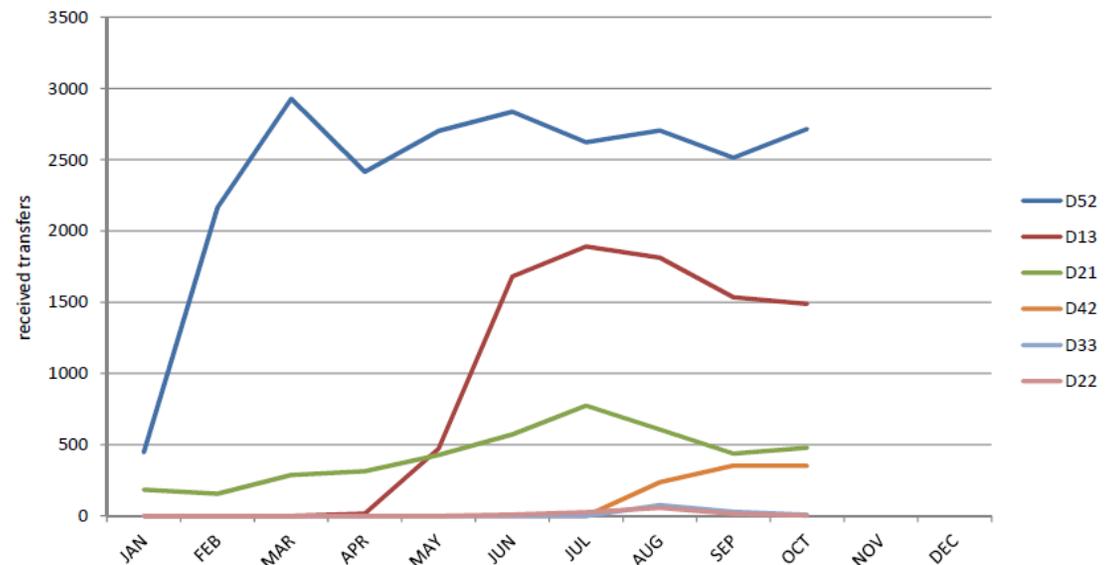
D 21 = Indiana Toll Road

D 42 = Versailles

D 33 = Bloomington

D 22 = Fort Wayne

2012 MEVO Transfers to ISP Posts



monthly report for Indiana

Wireless
314,189

VoIP
1,534

Wireline
5,849

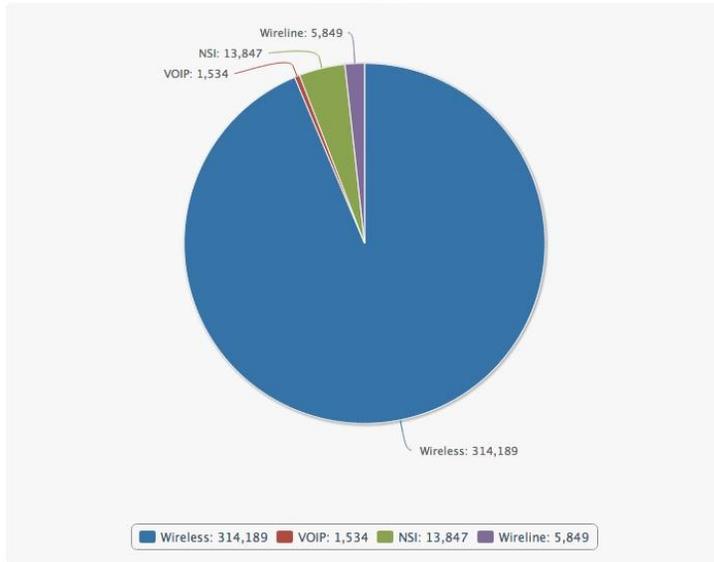
Total
321,572



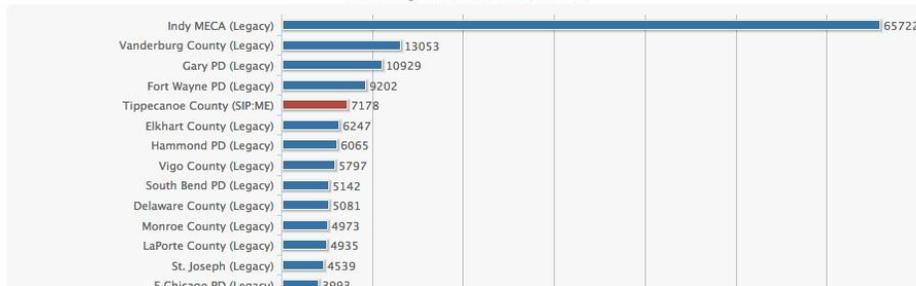
Wireless Calendar

Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
			10,637	10,700	11,514	12,684
5	6	7	8	9	10	11
11,275	10,382	9,950	10,044	9,922	10,252	11,211
12	13	14	15	16	17	18
10,468	9,468	9,548	9,803	10,177	10,737	11,459
19	20	21	22	23	24	25

Call Types



Monthly calls for all PSAP's



18). **Network PSAP tool kit** –INdigital continues to refine the PSAP tool kit (shown at left) and will be releasing a major update to the platform before the end of the year. The “Corydon release” has several refinements and newly updated features.

These include an improved touch screen assessable look and feel, improved accuracy and faster response.

In addition, wireline reporting capabilities have been integrated for many of the counties to provide additional insight for all matters related to 91-1 throughout the state.

19). **Update on matters related to OnStar** – There are no new topics for discussion.

section D - network quality

20). **G-11 network status** - There are no network issues to report. INdigital continues to receive the normal number of trouble tickets and reports.

Referring to the charts that follow this section, INdigital offers these observations and comments:

- Year to date there have been 250 trouble reports.
- In 2011 – 331 in 2010 – 294
in 2009 – 278 in 2008 – 188
in 2007 – 123
- The IN911 network has processed approximately 15.4 million total calls year to date.
- The 2012 YTD trouble index for 2.52 million YTD calls is .010% for 2012.

21). **Outage incidents** – INdigital has not had an FCC NORS (network outage reporting system) outage year to date.

However, while there are no outages that required a NORS report, there was a service affecting network event at 4am October 1, 2012.

A comprehensive internal report on this event was created and has been published. This root cause analysis has a detailed description of our findings.

In summary, a core router memory overflow in the Fort Wayne Cisco ASR -1. This triggered a failure-in-service of this network element. This event cascaded, with additional (previously unknown) single points of failure further impairing the operation of the IN911 network.

INdigital identified 146 calls that may not have been delivered to the correct PSAP call taker, and identified 7 calls that appear to have been impaired as they were delivered to a hosted customer equipment platform.

As a follow up, INdigital attempted to resolve the memory leak of Cisco ASR-1 on October 9. The company made a slight configuration change to move certain functions (BGP) from ASR-1 to another network element.

This caused a brief unexpected service impairment for PSAPS that used two hosted CPE service platforms, (MEVO and Solacom) located in the of Fort Wayne central office.

This service impairment lasted approximately 15 minutes and affected 11 calls. Based on our analysis, all calls were delivered to a PSAP for processing.

Since these events, INdigital has updated several internal practices and operating polices, including the implementation of controlled disruptive testing to minimize the potential for future events of this type.

Additionally, Joel McCamley has been retained by the Board to review INdigital's routine testing plan and internal processes regarding operations and service restoration. He will be issuing an independent report of his findings.

INdigital has taken swift and aggressive measures to test for, prevent and limit the possibility of future events.

22). **Industry outage trends** – Frontier also had outages in the current reporting period, affecting both wireline and wireless service.

Frontier, working with INdigital, had put in place safeguard routing to adjacent counties and alternate call delivery points at the PSAPs. As a result, there were no incomplete 9-1-1 calls during these outages.

23). **Update on Telephone Service Priority (TSP)** numbers that have been assigned to INdigital.

253 TSP numbers are assigned to active circuits
(complete)

2 TSP orders are confirmed but not complete.

0 TSP orders are pending, remain to be completed, or assigned

109 TXP numbers have been revoked for various reasons

0 TSP numbers are pending revocation or cancellation.

24). **Trouble ticket analysis** - This is the ticket breakdown by category and source. The colored bars in the chart below indicate the reporting entity.

The category keys are as follows:

911 SSP = 911 system service provider

PSAP Training and Support (a common term)

OSP = originating service provider

(wireline, wireless or VoIP provider)

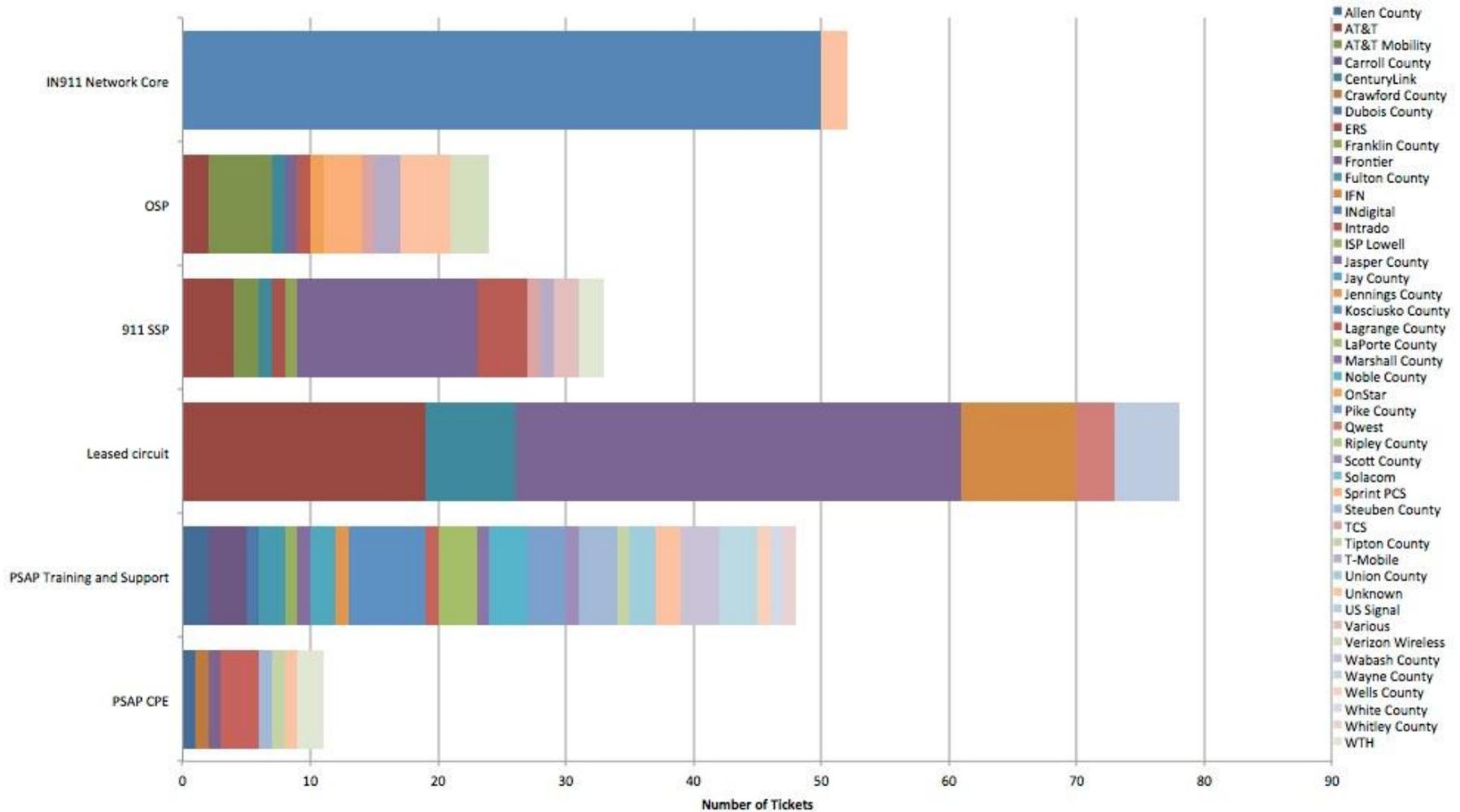
Leased circuit = (network, a common term)

PSAP CPE = PSAP CPE vendor or sub-system

We have created these broad categories to accurately reflect the type of support INdigital is providing.

Although we occasionally establish a 'color to company' relationship in our reports, the colors in this chart do not represent an entity in any way

IN911 Network Trouble Tickets by Category and Source Jan. 1, 2012-Oct. 31, 2012



section E – progress payments and new service development

25). **Non-Voice | Multi-Media Emergency Services**

Our service launch of the texTTY series II platform continues, and continues to be deployed at a number of PSAPs statewide. PSAPs are currently receiving training on the texTTY platform. (see also page 3 for an updated status map)

We will keep the IN 9-1-1 Board updated on our progress as the rollout of this service continues.

26). **Discussion of other new or open projects:** -

As part of the implementation of the new 9-1-1 statutes, INdigital is developing an enhancement to the NPTK that will allow the reconciliation of 9-1-1 traffic sources to the current 9-1-1 surcharge remittances.

This will allow the Executive Director to ensure that all originating service providers are complying with the Indiana statutes.

27). Patent issues – INdigital has received an industry letter regarding a potential patent infringement issue for the NENA industry standard of the Emergency Services InterNETworking concept. The company has retained counsel for these matters.

the rest of this page is intentionally blank